

REMARKS/ARGUMENTS

Claims 1-51 stand rejected, with claims 1, 12 and 13 objected to in the outstanding Official Action. Applicant has cancelled without prejudice claims 3, 7, 9, 11-14, 16, 20, 21, 23-32, 34-40, 42-46, 49 and 51 and amended claims 1, 4, 15, 17, 18, 22, 33, 47 and 48. Accordingly, claims 1, 2, 4-6, 8, 10, 15, 17-19, 22, 33, 41, 47, 48 and 50 are the only claims remaining in this application.

The Examiner's acknowledgment of Applicant's claim for priority and receipt of the certified copies of the priority documents is very much appreciated. Additionally, the Examiner's indication of PTO acceptance of the previously filed formal drawings is very much appreciated. Finally, the Examiner's consideration of the prior art submitted with Applicant's previously filed Information Disclosure Statement is appreciated.

In section 2, page 2 of the Official Action, the specification is objected to because of minor spelling errors. In the above specification amendments, Applicant has corrected the spelling errors and any further objection to Applicant's specification is respectfully traversed.

On page 2, section 3 of the outstanding Official Action, the Examiner objects to claim 1, alleging that the statement "adapted to" is informal. The Examiner suggests that the phrase is an "intended use" statement. The Examiner is incorrect, in that originally submitted claim 1 used "adapted to" to specify the claimed interrelationship between elements. The Court of Appeals for the Federal Circuit and the Manual of Patent Examining Procedure (MPEP) at Section 2173.05(g) has specifically indicated that the language "members adapted to be positioned" serves "to precisely define present structural attributes of interrelated component parts of the claimed assembly." *In re Venezia*, 189 USPQ 149 (CCPA 1976). Thus, the Examiner's

allegation that the use of the phrase “adapted to” in original claim 1 is improper is clearly erroneous. Notwithstanding the erroneous nature of the Examiner’s comments, Applicant has amended claim 1 to delete the reference which includes the “adapted to” language.

In section 4 on page 2, the Examiner objects to claim 13 as allegedly referencing “in either claim 12.” The claim that the Examiner is referring to is not found, as originally filed claim 13 makes no reference to “in either claim 12” and therefore any further objection thereto is respectfully traversed. Applicant does find the language “either claim 12 or 13” used in claim 14 and it is noted that such use is not superfluous.

The Examiner’s attention is directed to the MPEP Section 608.01(n) Section I entitled “Multiple Dependent Claims” and subsection “A. Acceptable Multiple Dependent Claim Wording” in which MPEP example claim 3 recites the language “a gadget as in either claim 1 or claim 2, further comprising . . .” (emphasis added). Thus, because Applicant’s claim form is identical to the form of a claim described in the MPEP as being acceptable, the language of Applicant’s original claim 14 is perfectly proper. However, notwithstanding the above, Applicant has cancelled claim 14 in the above amendment.

The Examiner correctly notes that claim 22 as previously filed was in improper form due to a multiple dependent claim depending from a multiple dependent claim. Applicant has amended claim 22 to depend from claim 1 and therefore is in proper dependent claim form.

In section 6 on page 2 of the Official Action, Applicant’s claim 30 is objected to and has been cancelled without prejudice, thereby obviating any further objection.

In section 7 on page 2 of the Official Action, claim 33 is objected to as referencing “the first design project” and has been amended to instead recite “a first design project.” Any further objection to claim 33 is respectfully traversed.

In sections 8-12, the recited claims are variously objected to, but the objections have been obviated because all of these claims 34, 35 and 39 have been cancelled without prejudice.

Accordingly, in view of the above, there is no further bases for any claim objection.

Claims 21-23, 28-31, 37, 48, 49 and 51 stand rejected under 35 USC §112 (second paragraph) as being indefinite. Of the rejected claims, only claims 22 and 48 remain in this application. The objection to claim 22 was because of its dependency on a respective preceding claim and now that claim 22 depends from claim 1, it is clearly definite.

Claim 48 was rejected in that it depended upon an unknown claim or claims. Applicant has amended claim 48 to depend from claim 33, rather than the Examiner’s proposed claim 47. Therefore, the amendments to claims 22 and 48 have cured any bases for rejection under 35 USC §112 and any further rejection thereunder is respectfully traversed.

Claims 24-32, 34-36, 38, 40, 42 and 47 stand rejected under 35 USC §101. Applicant has cancelled without prejudice all but claim 47. Claim 47 has been amended to depend from claim 41. Claim 47 recites “a data storage medium” which is a recitation of structure. The Patent Office has previously held that, as long as the recitation of a computer program or a series of method steps are stored in a data storage medium, that is a sufficient recitation of structure to meet the requirements of 35 USC §101. An example of such PTO approved claim language is in the preamble of claim 1 of U.S. Patent 6,836,860 which reads “a computer program product comprising a computer-readable medium containing computer-readable instructions that when

executed” Applicant’s claim 47 beginning with “a data storage medium” recites the necessary structure to avoid any valid §101 rejection and therefore reconsideration of the rejection of claim 47 is respectfully requested.

In section 17 on page 7 of the Official Action, claims 24-28, 32, 34-36, 38, 40 and 45 stand rejected under 35 USC §102 as being anticipated by Conklin (“gIBIS: A Hypertext Tool for Exploratory Policy Discussion”). Claims 24-28, 32, 34-36, 38, 40 and 45 have been cancelled without prejudice, thereby obviating any further rejection under 35 USC §102.

In section 19 on page 10 of the Official Action, claims 1-15, 18, 19, 21, 33, 37, 39, 41, 43, 44 and 47-51 stand rejected under 35 USC §103 as unpatentable over Conklin in view of Hirose (U.S. Patent 5,784,286). It is noted that claims 3, 7, 9, 11-14, 21, 37, 39, 43, 44 and 51 have been cancelled without prejudice. Therefore, the only remaining claims included within this rejection are claims 1, 2, 4-6, 8, 10, 15, 18, 19, 33, 41, 47, 48 and 50.

Applicant has amended independent claims 1 and 33 and both limit their subject matter to a directed link between selected nodes “wherein said directed link is **bi-directional** to permit a user to traverse the link in either direction” (emphasis added). The Conklin reference fails to disclose or suggest the desirability of utilizing a bi-directional link between selected nodes, especially where such nodes represent design knowledge stored in different files of a plurality of files.

The use of such bi-directional links confers a number of advantages on the present invention. It enables the design rationale for large problems to be captured as is discussed in detail in Applicant’s specification (page 21, line 31 to page 22, line 2). Further advantages of the bi-directional links between nodes in different files are set out on page 22, lines 17-25.

Systems such as Conklin require that the design rationale for any one project must, if it is to be interlinked, be captured on a single 2D canvas. This leads to problems in visual and spatial disorientation, which problems are actually admitted in the Conklin reference (section 5.9 beginning page 329). Conklin, while recognizing the problems, fails to suggest any solution, other than perhaps limiting the number of nodes present or including a map (layout) of the entire node structure to ease navigation. Accordingly, the Conklin device and its successors, such as “Questmap” and “Compendium,” are unsuitable for widespread routine capture of engineering design rationale.

Applicant’s concept of utilizing bi-directional links enables the rationale behind complex engineering design problems to be captured in an intuitive way. These bi-directional links allow nodes representing items of design knowledge to appear once only in a location on the canvas in which their context is apparent, yet still be linked to other parts of the canvas where that particular item of design knowledge may be relevant. The bi-directional links can also link items of design knowledge in separate canvases, stored in separate files, thereby allowing a large complex design rationale to be stored across a number of mutually cross-referencing files avoiding the need for any dedicated relational database management system often required with prior art systems.

The result of Applicant’s improvements due to the bi-directional links over the prior known systems is a tool that has enjoyed considerable success in the field of engineering design rationale capture. None of the prior known tools have been suitable for this purpose.

The Hirose patent discloses a different manner of presenting design rationale to a user in which a “storyboard” presentation is constructed by a trace unit 9 (see Hirose’s column 10, lines

10-47). While a storyboard of screens can be navigated back and forth, there is no disclosure of bi-directional links between nodes representing specific items of design knowledge (as claimed in Applicant's independent claims 1 and 33). Hirose, while allowing the development of a solution to an issue to be followed through on, fails to enable the linking between items of design knowledge arising from the addressing of different issues in the same project as is enabled by the present invention.

In view of the above, inasmuch as neither Conklin nor Hirose teach Applicant's amended independent claims 1 and 33 (the requirement of a "bi-directional" link is missing), even if these references were combined, they would not suggest or render obvious the subject matter of claims 1 and 33 or the claims dependent thereon.

Moreover, while the Examiner argues that the art of Conklin and Hirose are analogous art, that does not meet the test required by the Court of Appeals for the Federal Circuit of establishing some "reason" or "motivation" for combining these two different references. There is no reason why one would pick and choose elements or method steps from the two different references and then combine them specifically in the manner of Applicant's claims (even if there were a disclosure of the missing "bi-directional link" as noted above). The Examiner simply fails to provide the required reason for combining the Conklin and Hirose references. Accordingly, any further rejection of independent claims 1 and 33 or claims dependent thereon is respectfully traversed.

In section 20 on page 18, claims 42 and 46 stand rejected under 35 USC §103 as unpatentable over Conklin in view of Regli ("A Survey of Design Rationale Systems:

Approaches, Representation, Capture and Retrieval” 2000). Claims 42 and 46 have been cancelled without prejudice, thereby obviating the rejection under 35 USC §103.

In section 21 on page 20 of the Official Action, claims 16, 17, 20, 22 and 23 stand rejected under 35 USC §103 as unpatentable over the Conklin/Hirose combination, further in view of Regli. A number of these claims have been cancelled without prejudice and the only remaining claims are claims 17 and 22. Inasmuch as claims 17 and 22 both depend from claim 1, the above comments distinguishing claim 1 from the Conklin/Hirose combination are herein incorporated by reference.

There is no suggestion that Regli contains the disclosure missing from the Conklin and Hirose references, i.e., a bi-directional link. In fact, Regli teaches the use of hyperlinks and it is well known that hyperlinks are uni-directional and do not enable a user to navigate back and forth from one node to another. Even if the Examiner contends that a “back-button” feature of many internet browsers permits bi-directional linking, it is known that a truly bi-directional link is visible and transversible from either side of the link at any time. This, of course, is not the case with “back-button” browsing.

As a result of the above, even if Conklin, Hirose and Regli were combined, they would not disclose the subject matter of independent claim 1 or claims 17 and 22 dependent thereon. Moreover, in teaching a uni-directional link, Regli teaches away from the claimed combination. Therefore, any further rejection of remaining claims 17 and 22 is respectfully traversed.

Claims 29-31 stand rejected under 35 USC §103 as being unpatentable over Conklin in view of Regli. Claims 29-31 have been cancelled, thereby obviating any further rejection thereto.

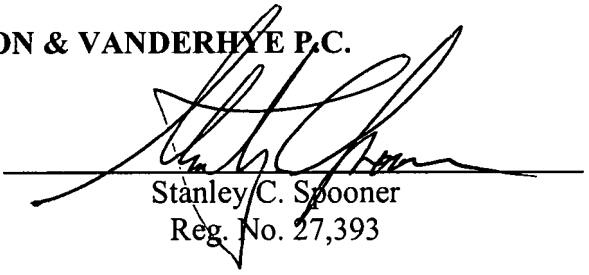
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Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 1, 2, 4-6, 8, 10, 15, 17-19, 22, 33, 41, 47, 48 and 50 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

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